



Jurisdiction Profile:

# Asthma in Worcester County

## Background

**What is Asthma?** Asthma is a controllable, chronic lung disease characterized by inflammation of the airways that leads to reversible airway constriction and excess mucus secretion. Narrowing of the airways results in reduced airflow that may cause symptoms of wheezing, coughing, tightness of the chest, and difficulty breathing.

Asthma is a serious and complex chronic respiratory disease with no known cure that currently affects an estimated 823,000 Maryland adults and children. In 2009, asthma in Maryland resulted in 11,474 hospitalizations, 39,834 visits to hospital emergency departments, thousands of hours of lost school and work days, and 67 deaths. Maryland costs for asthma in hospital and emergency departments totaled over \$99 million in 2009. Due to the burden on patients, families, and society, asthma is considered a major public health concern in Maryland and nationally.

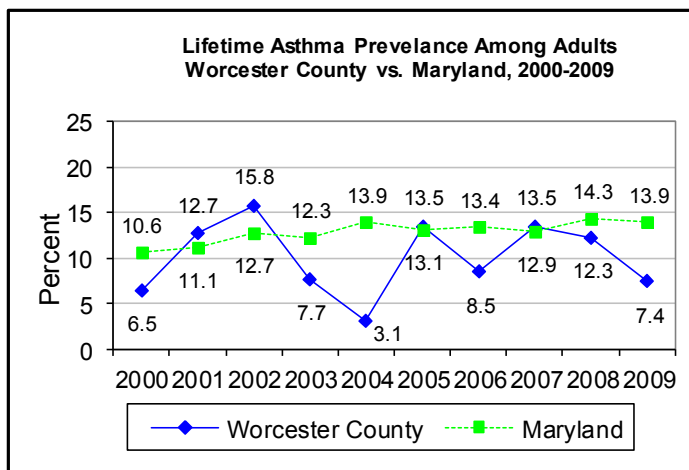
Worcester County Population Demographics, 2009		
Race	White	41,078
	Black	7,477
Age	0 - 4 yrs	2,439
	5 - 17 yrs	6,797
	18 - 64 yrs	28,583
	65+ yrs	11,303
	Total	49,122

**Data** in this report are from Maryland's Behavioral Risk Factor Surveillance System (BRFSS), Maryland Health Services Cost Review Commission (HSCRC), and Maryland's Vital Statistics Administration (VSA). Rates are calculated based on population statistics from the CDC's National Center for Health Statistics (NCHS) vintage population files. Data have been age-adjusted to the 2000 U.S. estimated population where noted. Since some Maryland residents are hospitalized in neighboring states, data on hospitalization of Maryland residents from Delaware, Pennsylvania\*, Washington D.C., and West Virginia are included when possible.

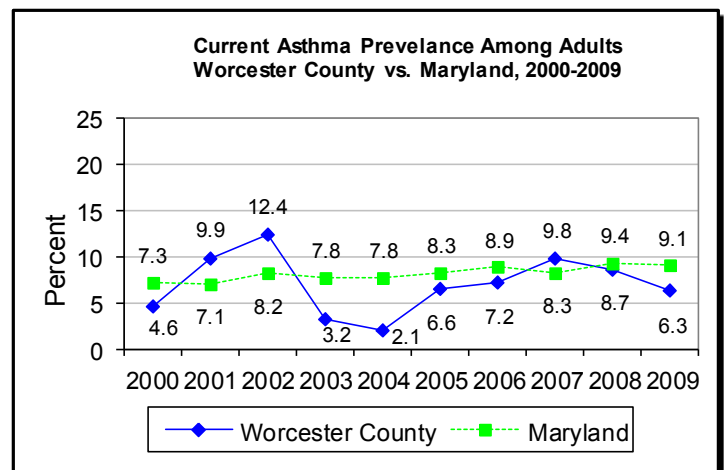
## Prevalence

Statewide in 2009, approximately 594,609 (13.9%) Maryland adults had a history of asthma. In Worcester County, approximately 7.4% of adult residents had been diagnosed with asthma. Of these, 6.3% reported that they currently have asthma, representing approximately 3,019 adults in Worcester County.

While asthma is one of the most common illnesses among children, there is little reliable county level data on the prevalence of asthma in children.



Maryland BRFSS, 2000-2009.



Maryland BRFSS, 2000-2009.

\* "The Pennsylvania Health Care Cost Containment Council (PHC4) is an independent state agency responsible for addressing the problem of escalating health costs, ensuring the quality of health care, and increasing access to healthcare for all citizens regardless of ability to pay. PHC4 has provided data to this entity in an effort to further PHC4's mission of educating the public and containing health care costs in Pennsylvania. PHC4, its agents, and staff, have made no representation, guarantee, or warranty, expressed or implied, that the data -- financial, patient, payor, and physician specific information -- provided to this entity, are error-free, or that the use of the data will avoid differences of opinion or interpretation. This analysis was not prepared by PHC4. This analysis was done by MACP. PHC4, its agents and staff, bear no responsibility or liability for the results of the analysis, which are solely the opinion of MACP."

## Emergency Department Visits

### Asthma Emergency Department Visit Rates (per 10,000) Worcester County vs. Maryland, 2009

Age	Worcester County		Maryland	
	n	Rate	n	Rate
Children 0 - 4 yrs	32	131.2	7,443	195.6
5 - 17 yrs	79	112.0	11,077	114.7
< 18 yrs	111	116.6	18,520	136.1
Adults 18 - 64 yrs	194	73.6	20,296	56.3
65+ yrs	25	22.1	1,018	14.7
≥ 18 yrs	219	65.0	21,314	50.3
Total	330	79.5	39,834	72.3

Maryland HSCRC, 2009.

<sup>a</sup> Rates are age-adjusted to the 2000 U.S. standard population.

In Worcester County, the asthma ED visit rate was approximately 3.1 times higher in Black residents compared to White residents (179.1 vs. 57.7 per 10,000).

The asthma ED visit rate in Worcester County was lower in White and Black residents compared to Maryland.

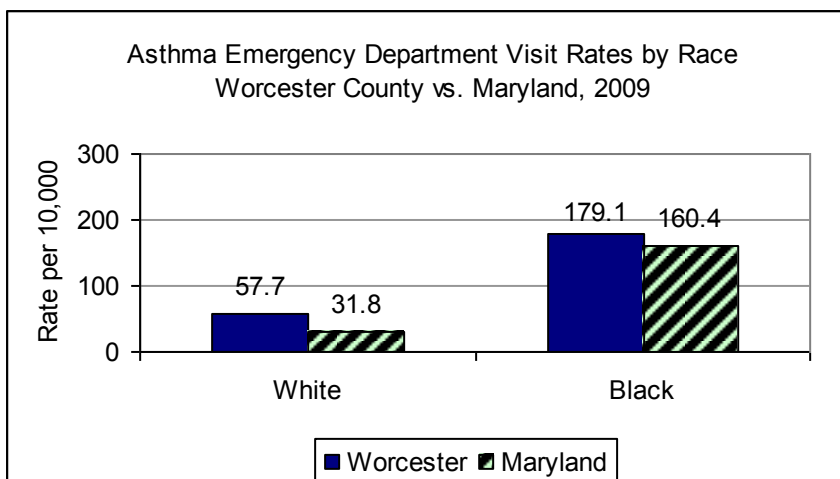
Worcester County ED visit rates exceeded the Healthy People 2010 goals for all age groups.

Maryland ED visit rates exceeded Healthy People 2010 goals for all age groups with the exception of the adult age group of 65 years of age and older.

There were 330 emergency department (ED) visits with asthma as a principal diagnosis in Worcester County for 2009, resulting in an age-adjusted rate of 79.5 per 10,000.

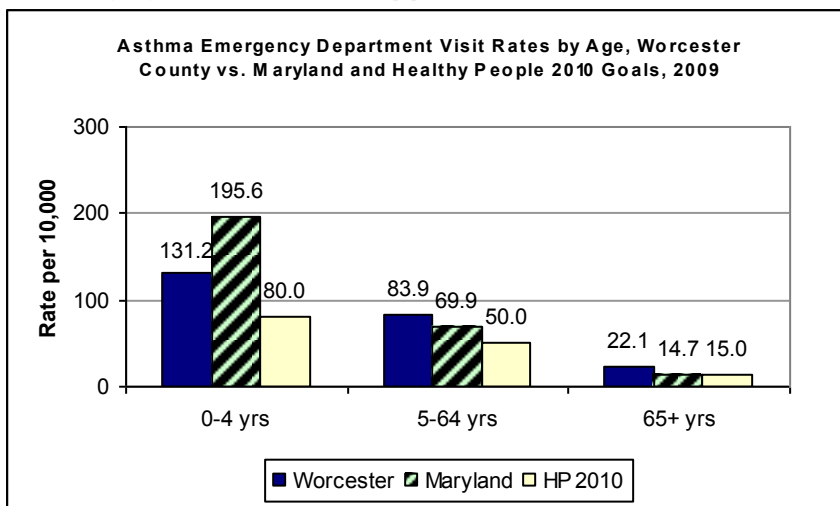
The ED visit rate for asthma among adult residents ( $\geq 18$  years) in Worcester County was comparable to the ED visit rate for Maryland adults (65.0 vs. 50.3 per 10,000).

The ED visit rate for asthma among children ( $< 18$  years) in Worcester County was comparable to the ED visit rate for Maryland children (116.6 vs. 136.1 per 10,000).



Maryland HSCRC, 2009.

<sup>a</sup> Rates are age-adjusted to the 2000 U.S. standard population.



Maryland HSCRC, 2009; DATA2010 Healthy People 2010 Database, U.S. DHHS, 2010.

<sup>a</sup> Rates are age-adjusted to the 2000 U.S. standard population.

## Hospitalizations

### Asthma Hospitalization Rates (per 10,000) Worcester County vs. Maryland, 2009

Age	Worcester County		Maryland	
	n	Rate	n	Rate
Children 0 - 4 yrs	--	--	1,834	48.2
5 - 17 yrs	--	--	1,400	17.4
< 18 yrs	--	--	2,976	25.4
Adults 18 - 64 yrs	22	7.2	5867	9.5
65+ yrs	--	--	2,087	30.0
≥ 18 yrs	39	8.1	7954	13.2
Total	49	9.2	11,474	19.8

MD HSCRC, DE Dept of Health, PA Health Care Cost Containment Council, WV Health Care Authority, 2009.

<sup>a</sup> Rates are age-adjusted to the 2000 U.S. standard population.

<sup>b</sup> Includes Maryland residents hospitalized in Delaware, Pennsylvania, Washington D.C., and West Virginia (MD county data not available for Delaware hospitalizations; MD state data only includes Delaware for total, 0-4, and 65+ due to age groupings).

In Worcester County, the asthma hospitalization rate was 4.3 times higher in Black residents compared to White residents (24.7 vs. 5.8 per 10,000).

The asthma hospitalization rates in Worcester County residents was lower in White and Black residents compared to Maryland.

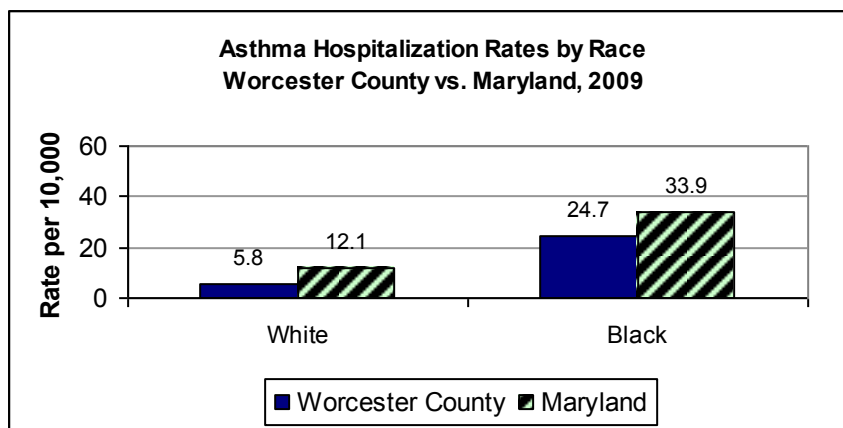
Rates based on the few hospitalizations for asthma among the 0 to 4 and 65+ age groups in Washington County are unstable and are not reported.

In 2009, Worcester County met the Health People 2010 asthma hospitalization rate goal in the 5 to 64 age group; however, Maryland exceeded the Healthy People 2010 goals for asthma hospitalizations rates in all age categories.

There were 49 hospitalizations for asthma as a principal diagnosis in Worcester County in 2009, resulting in an age-adjusted rate of 9.2 per 10,000.

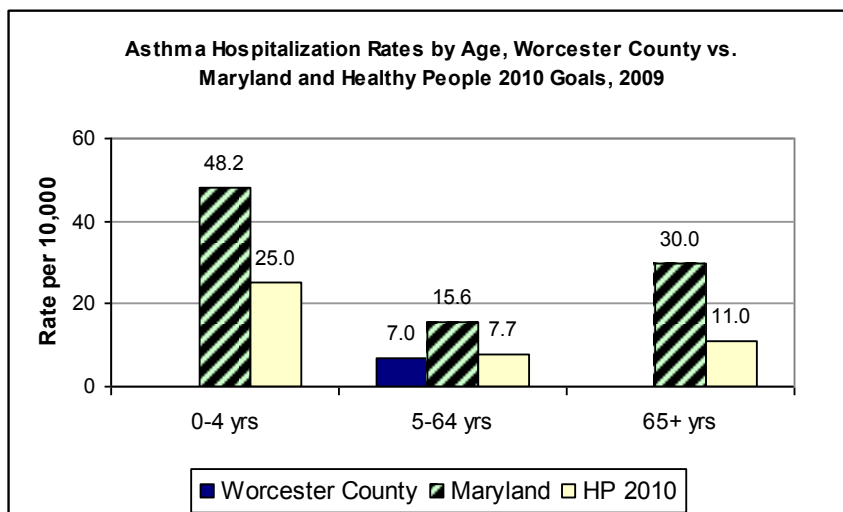
The hospitalization rate for asthma among adult residents (≥ 18 years) in Worcester County was 1.6 times lower than the hospitalization rate for Maryland adults as a whole (8.1 vs. 13.2 per 10,000).

The few hospitalizations for asthma among children in Worcester County are unreliable and are not reported.



Maryland HSCRC, 2009; Pennsylvania Health Care Cost Containment Council, 2009.

<sup>a</sup> Rates are age-adjusted to the 2000 U.S. standard population.



MD HSCRC, DE Dept of Health, PA Health Care Cost Containment Council, WV Health Care Authority, 2009.

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## Cost of Asthma

The average cost per asthma ED visit for children was \$324 in Worcester County and \$658 in Maryland. The average cost per asthma ED visit for adults was \$281 in Worcester County and \$647 for Maryland. The total average cost for an asthma ED visit in Worcester County was found to be statistically different than the state of Maryland.

In Worcester County, private insurance was the source of payment for approximately 30.9% of asthma ED visits, while public insurance was the source of 45.1% of the visits.

Private insurance was the source of payment for approximately 34.2% of asthma ED visits in Maryland, while public insurance was the source for 45.6% of the visits.

The average cost per asthma hospitalization for children was \$6,917 in Worcester County and \$5,403 in Maryland. The average cost per asthma hospitalization for adults was \$7,631 in Worcester County and \$7,397 in Maryland. The total average cost for an asthma hospitalization in Worcester County was found to be statistically different than the state of Maryland.

In Worcester County, private insurance was the source of payment for approximately 31.2% of all 2009 asthma hospitalizations, while public insurance was the source of 62.5% of the stays.

Private insurance was the source of payment for 30.6% of asthma hospitalizations in Maryland, while public insurance was the source for 60% of the asthma hospitalizations.

### Costs per Emergency Room Visit for Asthma, 2009

Age	Worcester County		Maryland	
	Average	Total	Average	Total
Children (0-17 yrs)	\$324	\$35,967	\$658	\$12,188,425
Adults (18+ yrs)	\$281	\$61,627	\$647	\$13,795,690
Total	\$296	\$97,594	\$652	\$25,984,115

Maryland HSCRC, 2009.

### Source of Payment for Asthma Emergency Room Visits, 2009

Source of Payment	Worcester County	Maryland
Medicare	11.2%	5.2%
Medicaid	33.9%	40.4%
Private Insurance	30.9%	34.2%
Self Pay/Charity	21.8%	18.6%
Other/Unknown	2.2%	1.6%

Maryland HSCRC, 2009.

### Costs per Hospitalization for Asthma, 2009

Age	Worcester County		Maryland	
	Average	Total	Average	Total
Children (0-17 yrs)	\$6,917	\$62,251	\$5,403	\$16,078,883
Adults (18+ yrs)	\$7,631	\$297,598	\$7,397	\$57,274,922
Total	\$9,497	\$359,849	\$6,843	\$73,353,805

Maryland HSCRC, 2009.

### Source of Payment for Asthma Hospitalizations, 2009

Source of Payment	Worcester County	Maryland
Medicare	39.6%	26.0%
Medicaid	22.9%	34.0%
Private Insurance	31.2%	30.6%
Self Pay/Charity	6.3%	7.7%
Other/Unknown	0%	1.7%

Maryland HSCRC, 2009.

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